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Criminological Research

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DISCUSSION PAPER 15

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Revised version of papers presented at the Annual Meetings of the Canadian Sociology and Anthropology Association in Winnipeg, June, 1986 and the Pacific Sociological Association, Las Vegas, April, 1988.

May 1988

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ABSTRACT

Interview and questionnaire data from a sample of high school dropouts are used to explore the relationship between post-school experiences and criminal behaviour. Various aspects of work experience are examined along with sex, family status, and length of time since leaving school to determine their independent and/or joint relationships with types of crime and drug use. Interview data provide a look at dropouts' own views about the relationship between labour market success and criminal behaviour. The results suggest that some, but not all, labour market variables are related to several measures of criminal behaviour, but not to violent crime. Both the quantitative and qualitative data cast doubt on a strictly economic explanation of criminal behaviour. Rather, the results suggest, especially for unemployed dropouts, that criminal behaviour and involvement with the criminal justice system may represent an aspect of participation in a somewhat marginalized world.

ACKNOWLEDGEMENTS

The assistance of Les Samuelson and Lawrence Walter in data collection, and Dave Odynak in data analysis, is gratefully acknowledged. Julian Tanner provided many helpful suggestions on various drafts of this paper. Alberta [illegible], Solicitor General Canada, the City of Edmonton, and the University of Alberta provided financial assistance for this study.

INTRODUCTION

Research on the link between school failure and delinquency shows that those who fail, particularly males, are more likely to engage in delinquent behaviour during their school years (Braithwaite, 1979; Schafer and Polk, 1967; West, 1984). While official data reveal that those with less education generally have the highest crime rates (Bell-Rowbotham and Boydell, 1972), there has been little research on the later criminal careers of school failures. And what research there is shows somewhat contradictory results. Some have claimed that dropping out of school is followed by a reduction in delinquency (Elliott, 1966; Elliott and Voss, 1974; Pronovost and LeBlanc, 1980). Other studies, differing in their interpretation, have identified a positive correlation between dropping out and official delinquency rates (Schafer and Polk, 1967; Schreiber, 1963; Simpson and Van Arsdol, 1967; Thornberry et al., 1985) as well as self-reported crime (Bachman et al., 1971; 1978). While Thornberry et al. (1985) infer a causal effect of dropping out on later crime, others have argued that dropping out is not a cause of delinquency but, rather, the reverse (Bachman et al., 1971; 1978).

This body of research focuses primarily on the role of the school in either motivating or controlling delinquent behaviour. In fact, the three major studies (Elliott and Voss, 1974; Bachman et al., 1971, 1978; Thornberry et al., 1985) have all traced the careers—both delinquent and conventional—of dropouts and graduates from the start of their high school experience to their early post-high school years. But this emphasis on the school has been accompanied by a neglect of the diversity of post-school experiences of dropouts. Elliott and Voss (1974), in fact, only followed their sample of school dropouts to the time when they would normally have graduated. Furthermore, these three studies did not examine the variety of labour market and economic status variables that may influence criminal behaviour among dropouts. Greater attention to these variables, and to other post-high school experiences of dropouts, might help explain why crime rates of dropouts appear to converge with those of high school graduates by the time youth reach their mid twenties (Bachman et al., 1978; Thornberry et al., 1985). Finally, there have been a number of significant societal changes since the time these studies were done which could have an impact on dropping out-work-crime relationships: youth unemployment rates have risen dramatically; the growth of a service-based economy may have had an impact on the types of jobs available to those with little education; and a trend towards later marriage may mean a longer period of time before young drop-outs are forced to become economically independent.

This study focuses upon a diverse sample of dropouts identified after they have, in fact, left high school. It examines a broader range of labour market and other explanatory variables which might help clarify the process through which criminal behaviour by dropouts is maintained. Our research aims at a clearer understanding of how the labour market may be related to criminal behaviour among school dropouts, and of how this relationship may be affected by other conditioning factors. Specifically, the relationships of current employment status, length of unemployment, work history and financial status with self-reported crimes and alcohol and drug use are identified. In addition, the effects of several other variables — sex, length of time since leaving school, family status — which may also be related to the occurrence of criminal behaviour among school dropouts are examined. Finally, following our quantitative analyses of these relationships, we draw upon interview data to explore the dropouts' own interpretations of their meaning.

LITERATURE REVIEW

Three key studies, differing in focus, design, sampling, and measurement, have addressed the question of crime among school dropouts. We wish to examine these studies in some detail in order to establish a context for presenting our own. Elliott and Voss (1974) expected that school leaving should decrease involvement in delinquency, reasoning that dropping out would reduce the school-related frustration and alienation they regarded as the primary causes of delinquency.[1] Thus, like Cloward and Ohlin (1960), they were assuming that the school is the central focus in the lives of young people. Elliott and Voss employed a longitudinal design. Those who dropped out of school were followed up to, but not beyond the time when they would normally have graduated. Dropouts were defined as those who voluntarily left school for a period of at least thirty consecutive days. Both self-reported and official measures of delinquency supported the conclusion that respondents classified as permanent dropouts were involved in more delinquent behaviour than were high school graduates. However, Elliott and Voss's data also revealed that dropouts' involvement in delinquency declined after they left school and that rates for out-of-school respondents were no greater than those for students in school.

Elliott and Voss recognized that the expected decline in delinquency with school leaving was complicated by post-school factors such as marriage and employment. That is, dropping out should reduce the motivation for delinquency to the extent that dropouts make a satisfactory adjustment to the adult, working

role.[2] They therefore hypothesized that employed, married dropouts should be less delinquent than unmarried, unemployed dropouts. With delinquency measured by police contacts, they found unemployed males to be more delinquent than employed males. Similarly, unmarried dropouts had a delinquency rate four times that of married dropouts, primarily due to the relatively large number of married and unemployed females who had very limited police contacts. Unemployed males had a higher rate of police contact than did employed males. However, these findings were based upon a total of only thirty-three official police contacts for dropouts while out of school. Similar results were reported for self-reported delinquent behaviour, with marriage again appearing to be more important than employment status. But, again, this analysis was based upon only forty-seven cases, of which nineteen were unemployed. And because most of these dropouts had left school between the latter half of grade eleven and near the end of grade twelve, they were "at risk" for subsequent criminal behaviour in this study for little more than a year. Clearly there is a need for further research based on a larger and more diverse sample of dropouts, and which covers a longer period of time after school leaving.

Bachman et al. (1971) used nationally representative data from U.S. public high schools to study male dropouts—those who interrupted their full-time attendance in high school for more than a few weeks for reasons other than illness—between 1966 when respondents had just entered grade ten and the spring/summer of 1970, one year after graduation should have occurred. They reported that delinquent behaviours preceded the act of dropping out of high school, although it was only when the frequency or seriousness of delinquency became high that later educational attainment was affected. In fact, their measure of delinquent behaviour in school (during the preceding three years for tenth grade boys) was the most powerful predictor of later school leaving. But although dropouts remained considerably more delinquent than stayins, there was no evidence that dropping out increased their rate. Thus, Bachman et al.'s data do not support the argument that dropping out is a cause of delinquency, although this conclusion is clouded somewhat by changes in the time interval for which the retrospective reports of delinquency were obtained.[3]

In their second (1978) report which included follow-up data to 1974, these authors stated that all three measures of delinquency—interpersonal aggression, theft and vandalism indices—correlated negatively with educational attainment. But they also reiterated that these differences were present at the

beginning of the study. During junior high school, those who later became high school dropouts had been involved in serious delinquency more than twice as often as those who later became college graduates. And although the overall levels of delinquency dropped with age, the correlations between educational attainment and delinquency were fairly similar at each of the five measurement points. But it was also the case that, compared to the other educational attainment groups, the dropout group stood out clearly with their higher delinquency rates during the high school years. After high school, however, the dropouts differed little from those who had graduated.

Bachman et al. (1978) also examined the relationship between unemployment and delinquency among those with different levels of educational attainment. They found that it was among the dropouts that the relationship between unemployment and aggression was particularly strong. By the final data collection point (four years after the normal date for graduation from high school), unemployed dropouts reported aggression levels three times as large as those of employed dropouts. However, there were only eighteen unemployed dropouts in this sample, along with eighty-three who were employed. But similar effects were not present for theft, vandalism or a composite seriousness of delinquency measure. This study also found a relationship between educational attainment and alcohol use, but little link between education attainment and marijuana or other drug use.

The most recent research by Thornberry et al. (1985) also supported the conclusion that dropping out of high school is positively correlated with later criminal behaviour, both in the short and longer term, with rates for dropouts beginning to converge with those of graduates only by the mid-twenties. This positive correlation persisted with controls for age and the post-school experiences of marriage and employment. Thornberry et al. (1985) also found that unemployment was positively related to crime independent of education and marital status, but didn't examine the possible interaction between educational attainment and unemployment. Furthermore, this study included only male dropouts and relied upon data from an earlier time period, namely, up to 1970.

Thus, this school-centred literature on dropouts and delinquency reveals somewhat contradictory results, as well as interpretations, of the relationship between educational attainment and delinquency. Elliott and Voss conclude that delinquency declines for those who drop out while Thornberry et al. show a positive correlation between dropping out and later criminal behaviour. However,

Bachman et al. dispute the claim that dropping out increases delinquency. There is obviously a need for additional research on the post-school careers of dropouts.

This study extends the research literature by examining the possible impacts of a wider range of predictor variables, including several different measures of post-school labour market experience. In addition, the context of the youth labour market has clearly changed over the years. From 1966 to 1976 — roughly the time period covered by the previous research — the youth unemployment rate in the U.S. ranged from 7.7 to 14.8% (Current Population Reports, 1978); but it had climbed to 19.9% in Canada by 1983. In 1984, when interviewing in this study began, the annual average Canadian youth (ages 15 to 24) unemployment rate was 17.9%. It dropped further to 16.5% by 1985 (Statistics Canada, 1983, 1984a, 1985). Thus, this study looks at the relationship between work and crime for school dropouts in a setting and a time where the probability of unemployment was considerably greater. This study also takes place in an era where the service sector has come to dominate the economy (Krahn and Lowe, 1986:41-6). The jobs that may be available to high school drop-outs today are more likely to be part-time, low-paying, and relatively insecure. Finally, there has been a distinct change over the past decade in the age at which Canadian youth first marry. The average age for both women and men increased by about two years between 1975 and 1985 (Nagnur and Adams, 1987:4). Thus, there may be a longer period of time before the decision to enter into some form of permanent relationship begins to have an impact on work and crime behaviours.

Furthermore, we are more interested in the question of why some dropouts engage in criminal activity while others do not, than with the concern, prominent in the literature, for documenting the relationship between educational attainment and delinquency. Hence, we consider the effects of several labour market variables on criminal behaviour, rather than restricting attention, as in the studies reviewed above, to the single issue of employment status. Criminologists have increasingly come to recognize that there is no simple link between employment status and crime. Research by Thornberry and Farnworth (1982) and Long and Witte (1981) has suggested that job stability, as well as satisfying and rewarding work experiences, are more important than simply finding employment. This would suggest that those in secondary labour markets — which would include many young adults with low levels of education and job skills — would be most at risk for criminal conduct. We will, therefore,

also examine current financial status, length of unemployment and stability of work history. Our sample contains both males and females, in various family situations, who had been out of school an average of thirty-one months. Thus, we will also be able to test for the possible influence of gender, living arrangements, and length of time since leaving school — independently or in combination with the labour market experience variables — on crime and deviance among school dropouts.

We begin by examining bivariate relationships, and then move to multivariate analyses of violent and property crime, and of alcohol and drug use. But, several different interpretations of a labour market-crime relationship are conceivable (Farrington et al., 1986:335). Our quantitative analyses will help us evaluate some, but not all, of these theories linking unemployment or underemployment and crime. However, our qualitative interview data allow an exploration of dropouts' own views on the relationship. Selected quotes from interview transcripts will highlight some of the different interpretations of the labour market-crime link provided by dropouts' themselves.

RESEARCH DESIGN

Data were collected in late fall of 1984 and the first few months of 1985 in Edmonton, Alberta, a large western Canadian city with a a population of close to 600,000 at the time. During the 1970s and early 1980s the city and provincial economies had expanded rapidly, largely due to increases in international oil prices. But heavy dependence on oil also meant that the recession of the mid-80s had a devestating effect on the local labour market. Unemployment rates in the city, which had been down around 3 or 4% at the height of the economic boom, jumped to close to 15% by 1984. Youth unemployment rates in the city were even higher. Thus, unlike previous research on high school drop-outs, this study was undertaken in a setting where the probability of unemployment and underemployment for youth, and particularly for those with little education, was very high.

A non-random quota sampling technique was used to contact 168 individuals who had left school without completing grade twelve.[4] The goal was to interview a wide range of early school leavers in order to capture the diversity of their experiences. An attempt was made to include in the sample both employed and unemployed drop-outs, males and females, and individuals who had contact with social service agencies as well as those who did not. The

respondents were reached through referrals from employers, other youth already in the sample, social service agencies (including a corrections centre), school counsellors, employment centres, and government-sponsored "job clubs" (job search and on-the-job training programs). From the 168 drop-outs initially interviewed, 162 useable interview transcripts and completed questionnaires were obtained.

Following a referral, the potential respondent was contacted and provided with a one-page summary of the project. The purpose of the study was explained, and she or he was invited to participate. Because relatively little is known about this segment of the youth population, semi-structured, tape-recorded interviews seemed the most appropriate method for undertaking exploratory research. Interviews were conducted in public places such as libraries, restaurants and malls, and ranged from 30 minutes to over an hour in length. The interview schedule addressed nine central sets of concerns, with lead questions and probes designed to allow respondents to fully document their situations. Following the interview, respondents were asked to complete a short questionnaire which contained a number of key demographic, labour market and social-psychological measures.

All interviews went smoothly, and respondents appeared to feel comfortable about answering questions, or skipping those questions they felt were too sensitive. To ensure anonymity, all identifying information about respondents was destroyed after the interview was completed. Taped interviews were subsequently transcribed and, using content analysis, coding frames were developed to facilitate quantification. Interview and questionnaire data for each respondent were then combined into a computerized data base which forms the basis for our examination of high school drop-outs' experiences in the labour market.

MEASUREMENT

As in most other research of this type, self-report measures of crime were used in a self-administered questionaire. Respondents were asked whether, in the past year, they had been questioned by the police as a suspect about some crime and whether they had been convicted of some crime, other than traffic violations. In addition, self-reports on a range of specific violent and property crimes were included. Specifically, the dropouts were asked *how many*

times in the past year they had:

1. broken into a building or a car?
2. taken something from a store without paying for it?
3. sold marijuana or other non-prescription drugs?
4. used physical force (like twisting an arm or choking) to get money or things from another person?
5. attacked someone with a weapon or your fists, injuring them so badly they probably needed a doctor?
6. got into a fight with someone just for the hell of it?
7. damaged or destroyed on purpose, property that did not belong to you?
8. other than from a store, taken something worth less than $50 which did not belong to you?
9. other than from a store, taken something worth more than $50 which did not belong to you?

Crime indices were also created by adding the number of self-reported specific crimes, and log-transforming the sums. A *property crime* index was constructed from questions 1,2, 8 and 9 above, while a *violent crime* index was created from questions 4 through 7. In addition, respondents were asked how frequently they drank beer, wine or other alcohol, smoked marijuana or hash, and used other non-prescription drugs. The original response categories for these questions were: every day, several times a week, once a week, once or twice a month, less than once a month, and never.

Labour market experience measures included current employment status (full-time, part-time or no job), total months unemployed since leaving school, and number of jobs held since leaving school. Respondents reported their current employment status on the short questionnaire, while interviewers asked the

other questions. Since semi-structured rather than completely standardized interviews were the goal, these issues were not explored as fully in some interviews as in others. Hence, some sample members were not asked about number of jobs held or months unemployed and, ultimately, this led to cumulative missing data problems in multi-variate analyses. Our response was to rely primarily on the measure of current employment status (which generated little non-response), but to supplement this with the inclusion of the other measures where possible.[5]

A general question about financial problems generated by unemployment or low-paying jobs ("have you had to cut back on anything?") was also not asked of a minority of the sample members. However, an additional item, included in the self-administered questionnaire, provided further information on financial problems. Respondents could choose from "I usually have more money than I need", ".... have enough money to get by", and ".... am short of money" in response to a question about their own financial situation.

CHARACTERISTICS OF RESPONDENTS

Slightly more than one half (51%) of this sample of early school leavers were male. The youngest member of the sample was 15 and the oldest was 26, with 85% of the group aged 17 to 23. On average, both males and females were 20 years of age at the time of interview, and had been away from school for almost three years. Over 90% of the sample had completed grade 9, but the young women in the sample were somewhat more likely than their male counterparts to have completed grade 11.

At the time of the interview, 53% of these dropout were unemployed, while 30% had a full-time job and 17% were working part-time. Some of those who reported themselves as unemployed may not have been actively looking for work, and so might not be considered officially unemployed. Nevertheless, the proportion unemployed within this sample is clearly higher than official unemployment rates for this group. By 1983, for example, the official national unemployment rate for young people who had not completed high school had exceeded 30% (Canada, 1984b:324-5), and was undoubtedly higher in Edmonton. However, the higher unemployment rate among these dropouts reflects a deliberate sampling strategy. The purpose of this study was not to generalize to the population of all early school leavers but, rather, to examine the effects of unemployment on the attitudes and behaviour of such individuals.

Consequently, an effort was made to include roughly equivalent numbers of employed and unemployed youth in the non-random sample. A greater proportion of the male sample members (65%, compared to 48% for females) were unemployed when interviewed. Consequently, females in the sample tended to have somewhat higher weekly incomes.

Among those who were asked about the total number of months they had been unemployed since leaving school (n = 131), about 25% reported three or less months of unemployment, while a total of 41% noted up to six months of unemployment. However, substantial numbers of respondents reported much larger totals, with an average of 12.3 months of total unemployment across the sub-sample of 131. A somewhat larger number of subjects answered the question about the total number of jobs held since leaving school (n = 143). Ten of these individuals (7%) reported that they had never held a job, while an additional 25% said they had held one or two jobs (including their present job for those employed at the time of the interview). Almost all of the rest of the sample reported between three and ten jobs, resulting in an average of 3.9 jobs.

All but seven of the subjects answered the forced-choice question about personal finances, with 28% stating that they were usually short of money, 65% reporting that they usually had enough money to get by, and only 7% saying that they typically had more money than they needed. The fact that a majority of subjects were not complaining about a shortage of money (even though over half were unemployed) probably reflects the fact that 55% of the sample was living at home with one or both parents, and could rely on them for financial help. Most of the other respondents were either living with other family members, with their partner/spouse, or with other friends. Only a small proportion (10%) lived alone. It seems, then, that the majority of respondents had access to some potentially supportive social relationships.

The occupational distributions of parents of the sample members show a moderate proportion of respondents coming from families of higher occupational status. Despite this, it is clear that unemployment is part of the typical family experiences of many of these respondents. Only 25% were from families that had never experienced unemployment in the past.

CRIMINAL ACTIVITY AND SUBSTANCE USE

Thirty-one percent of the high school dropouts reported having been questioned by the police and 23% said they had been convicted in court of a non-traffic crime in the past year.[5] These figures are substantially higher than those for graduating high school (8% and 3%) and university (2% and 0.2%) students who took part in a 1985 survey in Edmonton (Hartnagel et al., 1986). Clearly, these dropouts are a more deviant group. On the specific self-reported crime items, from 7% to 26% of these respondents reported some involvement over the past year, depending upon the type of crime in question. Generally, frequency of involvement varied inversely with the seriousness of the crime. For example, 26% reported having taken something from a store without paying for it . Excluding shoplifting, a total of 15% had stolen something worth more than $50, and slightly more (19%) had taken something worth less than $50. But only 7% said they used physical force to get money. Twelve per cent admitted breaking into a building or a car and 16% had damaged or destroyed property. While 13% said they had attacked someone with a weapon, 21% admitted getting into a fight just for fun. Finally, 24% of the sample reported having sold marijuana or other drugs.

Consistent with what we know from previous self-report research, few respondents were repeatedly delinquent. For most offences, less than 8% of respondents reported three or more illegal acts. The two exceptions to this generalization were shoplifting, a fairly common offence among young people, and selling marijuana or other drugs. Twelve per cent of the respondents admitted having taken something from a store three or more times and 6% said they had done so 10 or more times. A total of 17% said they had sold drugs three or more times and 11% reported engaging in this crime 10 or more times.

Sixty-four percent of the dropouts said they drank at least once a week. Clearly, alcohol is the drug of choice since the frequency of smoking marijuana or hash and, particularly, using other illegal drugs is much lower. Thirty-eight per cent of the dropouts said they smoked dope at least once a week. Use of other illegal drugs is much less frequent with about 13% of the dropouts reporting use of non-prescription drugs at least once or twice per month during the past year.

LABOUR MARKET EXPERIENCE AND CRIME: BIVARIATE RELATIONSHIPS

Table 1 displays the zero-order correlations among the seven dependent variables, four labour market/personal financial status measures, and sex. Current employment status is related to self-reported property crime and involvement with the criminal justice system, but only weakly with self-reported violent crime; in each instance, those who are unemployed report more criminal involvement. However, current employment status is unrelated to use of alcohol or smoking of marijuana. But unemployed dropouts were somewhat more likely to report using non-prescription drugs. The total amount of unemployment experienced by these dropouts since leaving school is unrelated to self-reported crime, but slightly related to alcohol and drug use; those dropouts with a greater cumulative experience of unemployment report more frequent use of alcohol and marijuana, as well as other non-prescription drugs.

Unemployment experiences are part of an unstable work history and so the number of jobs ever held may also be an important predictor of criminal and deviant behaviour. However, total number of jobs since leaving school is only related to being questioned by the police and to using non-prescription drugs. But dropouts who described themselves as usually short of money admitted to more property crimes, and more use of marijuana and other non-prescription drugs, although the relationships are weak. As expected, male dropouts are more likely to report involvement with the criminal justice system, as well as more frequent violent and property crime. But there were no significant gender differences in alcohol or drug use.

Inspection of the intercorrelations among dependent variables reveals, as expected, positive and significant relationships (with some exceptions for alcohol use). Those who admit to more violent and, especially, property crime are also much more likely to report having been questioned by police and convicted in court.[7] Frequent smoking of marijuana is also correlated with a greater likelihood of reported questioning by police and conviction in court, though to a lesser degree. Violent and property crime are fairly strongly correlated ($r = .509$) and each exhibits a moderate strength positive relationship with marijuana use. Similarly, the three measures of alcohol/drug use are positively correlated.

Table 2: Determinants of criminal behaviour and drug/alcohol use: Trimmed multiple regression equations.@

Independent Variable *	Dependent Variable* Questioned by police	Convicted of crime	Violent crime index	Property crime index	Alcohol use	Smoke Marijuana	Use Other drugs
Current employment status	-.017 (.237*)	.058 (.216*)	-.004 (.059)	.102 (.205*)	-.129 (-.017)	-.229 (-.022	.029 (.145)
Months unemployed	-.139 (-.164)	.009 (-.006)	.109 (.103)	.101 (.001)	.225* (.215*)	.147 (.128	.036 (.044)
Number of jobs	.113 (.184)	.199* (.243*)	.034 (.052)	.160 (.189*)	-.014 (.017)	.137 (.195)	.138 (.156)
Personal financial status	.138 (.098)	.006 (-.019)	-.060 (-.070)	-.138 (-.154)	.039 (.022)	-.093 (-.127)	-.112 (-.133)
Sex (female=1)	.009 (-.212*)	.013 (-.124)	-.130 (-.185*)	-.067 (-.156)	.033 (-.064)	.133 (-.046,	.095 (-.047)
Number of months since left school	.062 (.023)	-.058 (-.082)	-.087 (-.096)	-.148 (-.164)	-.032 (-.049)	.096 (.065	.258* (.141)
R is living with: (family, girl/boy friend=1; alone/friends=0);	-.136 (-.113)	-.253* (-.238*)	-.101 (-.095)	-.149 (-.140)	-.056 (-.045)	-.103 (-.085)	.148 (.059)
Male and currently unemployed (yes=1; no=0)	.441*	.273	.109	.178	.193	.39 *	.192
R#	.240 (.187)	.214 (.194)	.078 (.075)	.190 (.181)	.049 (.039)	.154 (.119)	.163 (.103)
(N)	(107)	(107)	(106)	(106)	(107)	(106)	(106)

@ See text for discussion of original list of independent variables; standardized regression coefficients (betas) reported in table; coefficients in parentheses are for equations without the interaction term.

* See Table 1 for more detailed description of variables and coding.

* Coefficient is statistically significant ($p<.10$).

MULTI-VARIATE ANALYSES

The four labour market/financial status measures,[8] gender, two additional control variables (number of months since leaving school and a binary variable indicating whether the subject was living with family members), and one interaction term (male and currently unemployed) were included in a series of multiple regression equations with the seven crime/substance use measures as dependent variables (Table 2).[9]

The amount of variation explained in the multiple regression analyses varies from a low of 5% for alcohol use to 24% for the questioned by police measure. While these values are generally small to moderate in magnitude, they do nevertheless summarize some important statistical relationships among key variables.[10] It is apparent, when examining the equations with and without the interaction term (male and unemployed), that inclusion of the term adds to the explanatory power of these analyses.

The largest amount of shared variance is found for the two measures of involvement in the criminal justice system, and for self-reported property crime. For each of these dependent variables, labour market variables are important predictors, net of other factors. The interaction term, in particular, is notably present in all three equations: male dropouts unemployed at the time of the interview are much more likely to report being questioned by the police (beta = .441), and also more likely to have been convicted of a crime (beta = .273) and to admit to property crimes (beta = .178), net of the effects of other predictors. As one would expect, equations without the interaction term identify employment status and sex as important predictor variables.

Having had a larger number of jobs since dropping out of school is also associated with court convictions and greater property crime involvement. Our earlier bivariate analyses suggested that an unstable work history might be important for the explanation of criminal behaviour among nigh school dropouts; these multiple regression results reveal that the relationship remains after controlling on other potentially important variables. On the other hand, total months of unemployment has a much less important effect on these three measures of crime, controlling on other variables in the equations.

The binary measure of personal financial status has a weak negative effect (beta = -.138) on the property crime index, and a similar size positive

Table 1: Labour market experience, financial status, gender, criminal behaviour and drug/alcohol use: zero-order correlations. #

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	$\bar{x}$	S_x	
.191 (131)	-.080* (143)	-.224 (155)	-.193 (162)	.204 (156)	.215 (154)	.146 (155)	.243 (155)	.037* (157)	.060* (154)	.168 (156)	2.23	0.88	(1)
	.049* (116)	-.111 (126)	.169 (131)	-.138 (126)	-.011* (126)	.050* (125)	-.041* (125)	.160 (127)	.177 (126)	.175 (126)	12.25	13.09	(2)
		018* (139)	-.084* (143)	.203 (140)	.104* (138)	.001* (139)	.031* (139)	.054* (141)	.099* (140)	.223 (140)	3.89	3.55	(3)
			.082* (155)	-.003* (155)	-.075* (153)	-.076* (154)	-.178 (154)	.028* (155)	-.140 (152)	-.168 (154)	0.72	0.45	(4)

VARIABLES

(1) Current employment status (1=FT; 2=PT; 3=unemployed)		-.281 (156)	-.218 (154)	-.243 (155)	-.247 (155)	-.084* (157)	-.072* (154)	-.013* (156)	0.49	0.50	(5)
			.471 (154)	.277 (155)	.379 (155)	.080* (156)	.271 (153)	.125 (155)	0.31	0.47	(6)
(2) Total months unemployed since leaving school				.352 (153)	.541 (153)	.117 (154)	.228 (151)	.099 (153)	0.22	0.42	(7)
(3) Total number of jobs held since leaving school					.509 (155)	.148 (155)	.251 (153)	.141 (155)	0.53	0.79	(8)
(4) Personal financial status (1 = enough money; 0 = not enough money)						.005* (155)	.311 (153)	.197 (155)	0.65	1.03	(9)
(5) Sex (1 = female; 0 = male)							.306 (154)	.230 (156)	2.64	1.09	(10)
(6) Questioned by police (1 = yes; 0 = no)								.280 (154)	1.92	1.73	(11)
(7) Convicted of crime (1 = yes; 0 = no)									0.35	0.48	(12)
(8) Violent crime index (log)											
(9) Property crime index (log)											
(10) Alcohol use (0 [never] - 5 [daily])											
(11) Smoke marijuana (0 [never] - 5 [daily])											
(12) Ever use other non-prescription drugs (1 = yes; 0 = no)											

Sample sizes for individual correlations in parentheses.

* Correlation coefficient NOT significant ($p < .10$).

effect on self-reported questioning by police, net of the impacts of other independent variables. Dropouts who felt they had enough money reported fewer property crimes, which is interpretable from an instrumental explanation of crime perspective. It is more difficult to explain why police questioning should be more frequent for this group.

The predictable effects of gender on crime are largely accounted for in these analyses by the interaction term. This measure has its most pronounced effect on the "questioned by police" measure. Most male crime rates are higher than female rates and, as our literature review reveals, unemployment has frequently been identified as a cause of crime. However, because males, particularly unemployed males, may spend more time in public places such as malls, street corners and bars, they may also be more at risk of being questioned. It is unlikely, though, that this explanation is sufficient, given the systematic positive effect of the interaction term across all seven dependent variables.

While the labour market measures do appear to influence property crime and involvement with the criminal justice system, it is clear from Table 2 that none of these predictors or, for that matter, most of the other independent variables, have much effect on self-reported violent crime. The gender effect is the only one of any substance; as we would expect, female sample members reported fewer violent acts (beta = -.130).

Turning to drug and alcohol use, Table 2 shows a moderate amount of explained variation in the use of marijuana (15%). Months unemployed and the number of jobs held since leaving school have small positive net effects, but it is the interaction term which accounts for most of the variation in marijuana use (beta = .357); unemployed males report more frequent use of the drug. Our earlier bivariate analyses suggested that some of the labour market variables might influence marijuana use. These more complex analyses reveal evidence of a distinct link between labour market difficulties and drug use, particularly for male early school leavers.[11] However, these findings cannot inform us about the direction of cause-and-effect. Frequent use of drugs could lead to unstable work patterns, or the inability to find a satisfactory job could encourage drug use.

The same set of independent variables accounted for an equivalent amount (15%) of explained variance in the use of other non-prescription drugs. While the interaction term has a positive net effect (beta = .192), this effect is

smaller than was the case for marijuana use. Nevertheless, there is evidence, again, of a link between drug use and labour market problems.[12] The primary predictor of other drug use is time out of school with a standardized regression coefficient of .258. Marijuana and alcohol obviously play a larger part in the life-styles of younger drop-outs while older individuals are more likely to encounter, and use, other non-prescription drugs.

We can account for only 5% of the variation in self-reported alcohol use among these early school leavers. However, again we find labour market measures — months unemployed and the combination of being male and unemployed — are involved. Other interaction terms had little impact on this dependent variable, with one exception (results not shown). The currently unemployed who also reported that they were short of money used alcohol significantly less often. While unemployment may increase the probability of alcohol (and drug) use,[13] it may also inhibit such behaviour through its effect on the spending habits of dropouts.

Summarizing these multiple regression results, we find that unemployment and labour market difficulties, represented by several different measures, do have impacts on self-reported involvement with the criminal justice system, as well as on self-reported crime and substance use. Violent crimes are the exception. On the other hand, being short of money appears to have few important impacts on deviant behaviour. Time out of school helps explain use of non-prescription drugs (other than marijuana), but little else. Finally, male dropouts, particularly if unemployed, are considerably more likely to report criminal/deviant behaviour.

This brings us back to the question about *why* unemployment and labour market difficulties among school dropouts might be associated with criminal or deviant behaviour. It could be that unemployed dropouts commit property crimes for instrumental reasons - they don't have enough money to purchase what they need or want. Our analysis reveals a weak net effect of current financial status on the property crime index which would support this economic crime explanation. But this finding provides, at best, only minimal support for either an absolute deprivation or strain theory interpretation of the unemployment-crime relationship. If economic hardship, or a discrepancy between material goals and legitimate means, were, in fact, generating crime, the "shortage of money" measure should figure more prominently in the regression results.

There are several other plausible explanations of a link between unsatisfactory labour market integration and crime (Farrington et al., 1986:335). Control theory could be applied: lack of a job means the absence of controlling bonds to conventional society. Alternatively, unemployment might generate deviant behaviour because of the opportunity provided by the free time available, time where a young person might be more "at risk" of becoming involved in illegal activities. Related to this, unemployment would increase the likelihood of an individual associating with others in a similar situation. Hence, sub-cultural explanations of deviant behaviour might be brought into the discussion. Finally, of course, the link might be spurious, with the same social and psychological factors which increase the probability of deviance being responsible for problems in coping in the labour market. While the present study was not designed to quantitatively evaluate these alternative theoretical perspectives, we do have some relevant interview data. We turn, then, to observations of sample members themselves about the link between unemployment and crime.

DROPOUTS' OWN VIEWS

Interviewers were given a set of optional questions about criminal behaviour which they could ask at the end of the semi-structured interview. These questions focused on types of criminal activity, on how the respondent had become involved, and on his or her opinion about whether unemployment had been part of the process. Obviously, the non-random nature of the sample, and the fact that not all subjects responded to (or were asked) the questions, limit the generalizability of conclusions drawn from these conversations.[14] Nevertheless, these self-assessments of the link between unemployment and crime are informative.

When asked directly "Do you think that being unemployed had anything to do with the charges that were laid against you?", one of the female subjects (#55) answered:

> Yes... because if I had of been working and had the money, then I could of went out and bought whatever it was that I was — wasn't paying for with the money I had.

However, this comment was an exception. Examination of the interview transcripts reinforces our earlier conclusion that a shortage of money is seldom the direct cause of criminal behaviour. Even this subject went on to explain that:

... when I first started ripping off things it was the people pressuring me into it and then like I couldn't say no, and then finally just the hell with it.

The few other subjects who did mention money tended to do so along with other rationalizations of their behaviour. One male subject (#62) began by commenting on a shortage of money, but concluded with reference to the excitement of shop–lifting (and with a reminder that age is a critical correlate of crime):

> Well when I was sixteen I got busted in Edmonton when I first came here for stealing a pair of jeans from Eatons cause I didn't have any clothes and I didn't have a job to buy anything. ...[I: Were you stealing primarily because you didn't have a job?] Yeah, like if I had a job ... like I don't steal anymore. I guess stealing was a game for me when I was younger and I guess I've just gotten tired of the game. The same with drugs...

Another subject (#65), describing how he had been caught stealing a large amount of food from a restaurant freezer, attributed the act to being "really broke and we didn't have much for food". While filling in the details he explained how "partying with a bunch of guys", being out at night, and stumbling across an open door culminated in the theft. Sticking to the economic explanation of his own behaviour, he concluded with a different interpretation of why other unemployed youth commit crimes: "Yeah all young unemployed kids do is drink, get high, and that just leads into troubles so ... "

Multiple explanations of the link between unemployment and criminal behaviour were the norm among the sample members willing to talk about this subject, as the above examples demonstrate. Drugs and alcohol were mentioned frequently, as were free time and boredom leading to deviant behaviour. One male respondent (#32) who had been heavily involved in the drug sub–culture, and who had been charged with possession of marijuana and chemical drugs, described the process:

> . when you're unemployed you drink, right? O. I did. I did a lot of extra drinking. A lot of people get into trouble when they drink and I got into trouble.... you get bored and you see a little chance for a little excitement and stuff like that, you know,... get roaring drunk...

Another dropout (#20) described how he had become involved in drugs:

> I don't know... I wouldn't blame it on peer pressure cause maybe my friends pushed me but I pushed them just as hard. We kinda got each

other into trouble constantly, and it started out as experimentation, more or less out of curiosity, when you're that young, you don't know any better. [I: Do you think when you're unemployed, do you think that that had any effect on your illegal activities?] Well, I increased the amount of drugs and booze cause I was bored and I think that had a great effect, the psychological instability it created later on, maybe, and the fact that I was dormant upstairs.

This oblique reference to anxiety about joblessness leading to drug use was one of very few comments that could be taken as evidence that such stress is an intervening variable. Boredom, and a youthful quest for excitement, were mentioned much more frequently, as were the effects of "hanging around" with others in the same situation. A female respondent (#101) admitted too being "really lucky" about not being caught and explained that unemployment was part of the problem since:

> ... cause I wasn't going to school at the time and I was hanging out with the wrong people and they were trying to get me to do the wrong thing.

Another male subject who had been involved in car theft and burglary (#73) listed all the typical ingredients:

> Um, I guess my friends asked me if I wanted to do it and I was drinking at the time and there was nothing to do so I thought I may as well try cause we never did it before.

Anecdotes that would support a control theory explanation are harder to find, although this may reflect the way the questions were asked.[15] One subject (#76) commented dryly, in response to a question about whether unemployment had led to his breaking and entering escapades: "Oh yeah, if I had been working I wouldn't have been up that time in the morning." But most often, reminiscences about past criminal activities highlighted the interacting effects of free time, boredom, youthfulness, drug and alcohol use, and peer group pressure. Having dropped out of the conventional activities of school, and failing to become fully integrated into the conventional world of work, these young people were living in, or had lived in, a somewhat unique sub-culture. Their descriptions of this social milieu cannot identify a single best explanation of the link between unemployment and crime, but they certainly highlight some of the more critical factors.

CONCLUSION

How do labour market experiences during a period of relatively high youth unemployment relate to criminal behaviour among school dropouts? We have addressed this question with quantitative analyses and by looking at our respondents' own views on the subject. Our multiple regression results demonstrate the presence of labour market and crime relationships, but also highlight the importance of distinguishing among types of labour market variables. Current unemployment, particularly for males, is related to most of our measures of crime and drug use. Similarly, an unstable work history is related to several of the dependent variables. These relationships persist after controlling for other labour market/economic variables as well as for respondents' family status and length of time since dropping out. However, none of the labour market variables are related to violent crime. Furthermore, current financial status appears unrelated to the crime/deviance measures, and total amount of time unemployed is related only to alcohol use: the more time spent unemployed the more frequent the alcohol use.

The absence of a relationship between financial status and property crime casts doubt upon both economic hardship and strain types of explanations of property crime, at least for high school dropouts. The interview data reinforce this conclusion that the crimes of these dropouts are not primarily motivated by economic considerations. Perhaps enough money can be obtained from other family members, or the welfare system, to reduce economic pressures toward crime. The non-relationship between months unemployed and property crime further weakens the economic deprivation explanation. Interestingly though, the more months unemployed, the more frequent the use of alcohol and marijuana. These relationships may represent another form of the general proposition that unemployment is more likely to lead to passive forms of withdrawal from society than to active confrontation with it (Tanner et al., 1984). In other words, retreat into frequent use of alcohol with lengthier exposure to unemployment parallels findings from other studies which suggest that unemployment is more likely to lead to depression and lowered self-esteem than to active expressions of discontent.

Among these dropouts, the combination of being male and unemployed is particularly likely to be related to being stopped and questioned by the police, to more frequent smoking of dope and, generally, to more involvement in crime. The interview data suggest that this may all be part of a certain deviant

lifestyle. Bored, unemployed males with time on their hands hang out together, engage in certain types of deviance for some "action", and present a more visible target for the police. Increased involvement in deviant behavior for unemployed dropout males may, thus, be a normal part of a somewhat marginalized world, a world where social controls of a job are absent, where peer group influences are strong, and where free time and boredom combine to increase the opportunities for and temptations to engage in deviant behaviour.

FOOTNOTES

1. In an earlier study, Elliott (1966) also questioned whether dropping out of school leads to delinquency. Using official records, he reported that delinquents who dropped out of school also had higher delinquency rates while in school, and that male dropouts had a lower delinquency rate after dropping out than did boys who remained in school.

2. Provonost and LeBlanc (1980) similarly report that experiences after leaving school have an impact on the reduction of delinquent behaviour, with employment especially reducing involvement in delinquency.

3. Delinquency scores at Time 1 were based on self-reports covering the previous three years; reports at Times 2 and 3 referred to the previous eighteen months; and reports at Time 4 were based on the past year.

4. The non-random sample obviously makes significance tests, used in the standard manner, inappropriate. However, significance tests can also be interpreted as indicators of measurement error and so may be useful for distinguishing more important from less important effects of predictor variables. Consequently, we report significance tests but do not emphasize them as much as we might, given a randomly selected sample.

5. Attributing criminal behaviour *over the past year* to current employment status is problematic in cause-and-effect terms, given a model where deviant/criminal behaviour is the dependent variable. An alternative would be to construct a variable indicating whether or not a respondent had ever been unemployed. But given the nature of this sample of dropouts, such a skewed variable would be of little value — only 14 (8.6%) had never been unemployed. Use of the current employment status measure provides a larger case base but, in addition, we would expect less measurement error

in this variable, compared to others based on recollection of employment experiences over a long period of time.

6. With the ten respondents from the Belmont Correctional Institution excluded, the frequency of involvement in the criminal justice system dropped slightly to 28% for police suspect and 18% for court conviction. Exclusion of these cases also had only minor effects on the distribution of responses to the other more specific crime questions.

7. These correlations are, of course, far from perfect, due in part to the well-known fact that many crimes committed remain unknown to the police and courts.

8. A large number of cases were lost when the months unemployed and number of jobs measures were added to the regression equations, since these questions had not been asked in all of the interviews and a list-wise deletion of cases procedure was used. However, additional analyses of the effects of this case loss failed to identify any important biases. One of these tests deserves comment. Those respondents who did not answer these two labour market questions also reported *less* criminal behaviour and substance use. This was traced to the facts that a) female interviewers had interviewed female subjects, b) several of the female interviewers had focused less on job-related issues in the interviews they conducted, and c) young women, as previous research has demonstrated, are less criminally inclined. Thus, while our initial concern was that the more deviant subjects would have been excluded from the multi-variate analyses, our tests revealed the opposite. However, while the final sub-sample contained somewhat higher proportions of males and, thus, more deviant subjects, tests of the variety of other independent variables identified no significant differences between those included or omitted.

9. Several additional variables were included in preliminary regression analyses, but then dropped. Self-report measures of typical length of jobs held, whether the subject had been forced to cut back on activities and expenditures due to unemployment, type of leisure activities with friends, and how well the subject got along with her/his family added little to the amount of explained variance.But they did lead to even lower sample sizes because of extensive missing data. Rather than examining all possible interaction effects, we tested, one at a time, only those which were of

theoretical importance: current employment status with months unemployed, with shortage of money, with gender, with months out of school, and with living arrangements; months unemployed with months out of school and with shortage of money; gender with living arrangements. The combination of being male and unemployed proved to have the most pronounced effect in the regression equations, so only this particular interaction term has been included in Table 2.

10. The relatively low explained variation may be, in part, a function of our sampling strategy. Deliberately choosing a sample where deviant behaviour would be expected to be high and labour market integration would likely be low would mean the under-representation of those less deviant and more successful in the labour market. Hence, correlations between deviance and labour market success might be attenuated. In addition, the study from which these data are drawn was not designed to examine the effects of labour market variables on criminal behaviour; hence, the typical range of predictors of crime was not included in the study.

11. Inclusion of other interaction terms such as months unemployed by current employment status, by months out of school, and by personal financial status (results not shown, but available on request) also demonstrated significant links between labour market difficulties and marijuana use (betas ranging between .37 and .41).

12. The testing of several other interaction terms involving labour market measures (results not shown) again showed small further increases in explained variance attributable to employment problems.

13. This particular interaction term had a weak to moderate negative effect on both alcohol use (beta = -.29) and use of other drugs (beta = -.23).

14. Given the potential sensitivity of the subject, and the fact that interviews were recorded, interviewers were instructed to ask about crime only if they felt that enough rapport with the respondent had been developed. In some cases, however, the topic had already come up earlier in the interview. The optional questions were introduced with 80% of the total sample, and 33 of the respondents went on to discuss this subject at length.

15. Respondents were asked whether unemployment had influenced their criminal activity, but not if having a job had reduced this activity.

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ISSN: 0824-5134

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